Environment Assessment

Deerwood Ranch Wild Horse Ecosanctuary

July 2012

BLM

High Desert District – Rawlins Field Office, Wyoming

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
HIGH DESERT DISTRICT
RAWLINS FIELD OFFICE

ENVIORNMENTAL ASSESSMENT TITLE PAGE

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Authors & Reviewers	Title	Assignment
Marcell Astle	Rangeland Management Specialist BLM	EA Author
Andy Warren	Supervisory Rangeland Management Specialist BLM	Review
Mike Calton	Wild Horse and Burro Specialist (interim) BLM	Review
Heath Cline	Wildlife Biologist BLM	Review
Susan Foley	Soils Scientist & Pest Coordinator BLM	Review
Chris Jones	Recreation Specialist BLM	Review
Natasha Keierleber	Archeologist BLM	Review
Kelly Owens	Hydrologist BLM	Review
Heather Schultz	Project Manager	Review
John Spehar	Planning & Environmental Coordinator BLM	Review
Tim Novotny	Assistant Field Manager for Resources BLM (Acting)	Review

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I. Introduction

The Wild Free-Roaming Horse and Burro Act of 1971 (WFRHBA) directs the Secretary of the Interior to manage wild horses and burros on ranges designated for their use in a manner that is designed to achieve and maintain a thriving natural ecological balance and multiple use relationship. The Bureau of Land Management (BLM) manages wild horses and burros in 179 separate herd management areas (HMA) in 10 western states. Wild horse and burro herds increase at relatively high rates in North America due to lack of natural predators. If left unchecked, population growth results in a decline in both the health of the range and the wild horses. When populations exceed the Appropriate Management Level (HMA) established to maintain a thriving natural ecological balance and a determination is made that an over population exists within a HMA, the WFRHBA requires the BLM to "immediately remove excess animals from the range so as to achieve appropriate management levels." (16 U.S.C. 1333(b) (2).

As part of the 2010 Appropriations Act, Congress directed the BLM to do the following:

"The Committee directs the Bureau to (1) consider private proposals for long-term care of wild horses and burros; (2) create a bidding process among such proposals, and (3) prepare and publish a new comprehensive long-term plan and policy for management of wild horses and burros that involves consideration and development of proposals by non-governmental entities. In conformance with this direction, the BLM developed a draft strategy that was released to the public on June 3, 2010, and again on Feb. 28, 2011. This strategy will be formally delivered to Congress later this year. Outlined in this strategy were seven key components. One of the key components of this strategy was to expand opportunities for partnerships for eco-sanctuaries to provide cost effective, humane, and long-term care for unadopted and unsold wild horses. These eco-sanctuaries are also intended to serve as a place to educate the public, as well as provide another outlet to potentially adopt and train horses.

Moving forward with this concept the BLM published two separate Requests For Applications (RFA) s These requests were issued on March 15, 2011, and March 25, 2011. The first request sought partnerships for eco-sanctuaries on private lands. The second request was for partnerships on combination private/public land. These solicitations were published for 60 days, with a 30-day extension due to the high level of interest. The solicitation periods ended on May 15 and 25. A Technical Proposal Evaluation Committee (TPEC) evaluated how well each proposal met the requirements of the RFA and at what cost to the federal government. One proposal was ultimately selected from each solicitation to forward and be evaluated under the National Environmental Policy Act (NEPA) process. This represents the first of the two proposals to be evaluated.

The placement of wild horses on privately owned, prairie rangelands in the Midwest has been under - taken by the BLM for more than 20 years. In that time, there has been no need to remove animals or terminate long-term holding pasture contracts due to unacceptable pasture or wild horse conditions. Deerwood Ranchers that manage these rangelands have continued to be good stewards of their private lands. The landowners are contracted to keep the animals in good body condition and to provide for their needs (feed, water, shelter, supplemental feed and feed supplements, and natural hoof care).

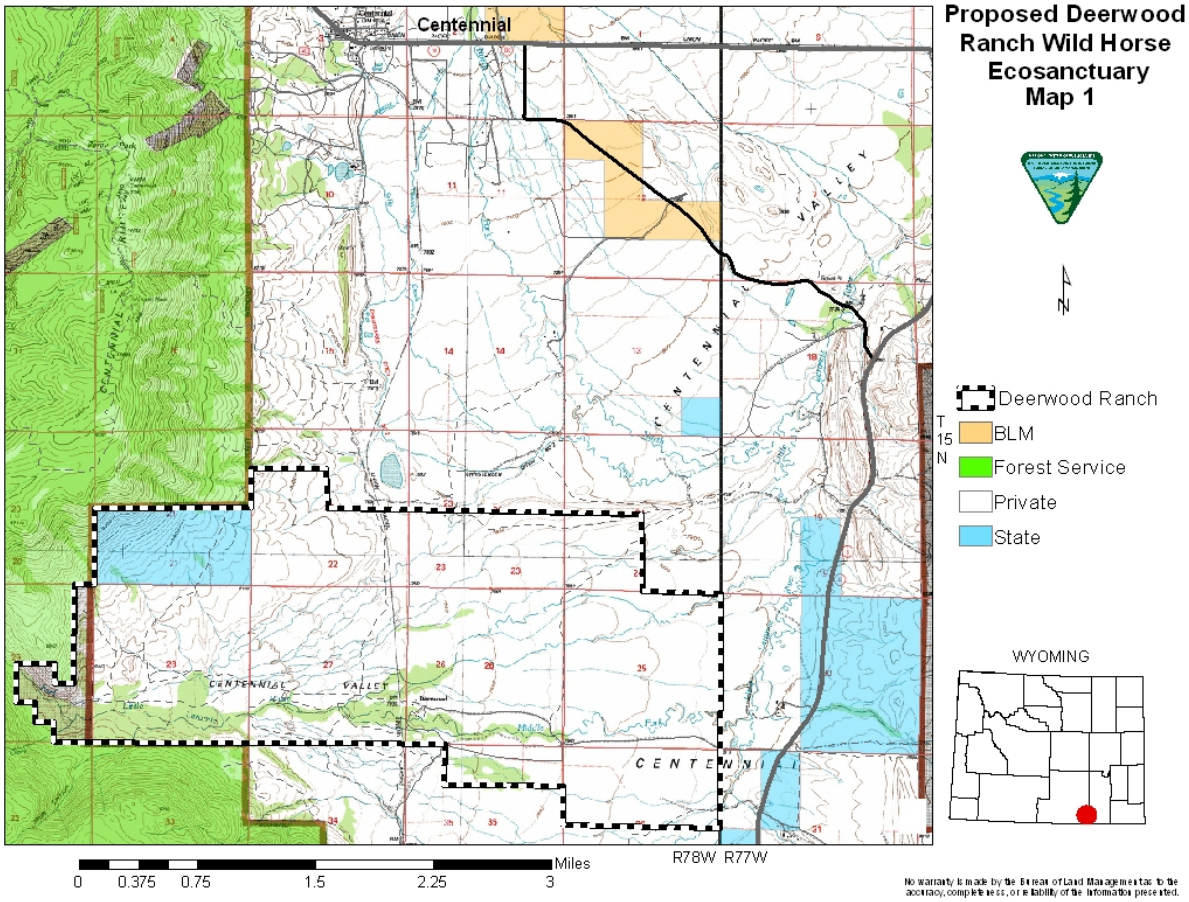
To provide additional pastures for the care of excess wild horses, the BLM proposes to enter into a Cooperative Agreement (CA) for the care and maintenance of wild horses on non-federal ranch land, within the High Desert District, Rawlins Field Office (RFO), known as Deerwood Ranch in the Centennial Valley of Wyoming (See Map 1). Mostly older, unadoptable geldings from HMA's in Wyoming will be cared for at Deerwood. After the initial award period the agreement may be renewed

every five years through a competitive process. If Deerwood Ranch does not renew at the end of the agreement, the BLM will move the wild horses to other long-term pastures or future ecosanctuaries.

A. Regional Setting

The proposed Deerwood Ranch Ecosanctuary facility is located at the foot of the Snowy Range Mountains in south central portion of Albany County, Wyoming. More specifically, Deerwood Ranch is located 14 miles south of the community of Centennial along State Highway 130, a designated scenic bi-way, and five miles north of the community of Albany (See Map 1). Laramie, Wyoming (population 31,312 U.S. Census Bureau, July 2011), the largest community in close proximity to Centennial and the Deerwood Ranch, is located 30 miles east of Centennial, Wyoming.

Centennial, Wyoming lies at 8,076 feet and the climate consists of short, warm summers and long, cold winters. The average high temperature is 53.1 degrees F., the average low temperature is 27.7 degrees F. Average precipitation for Centennial is 14.19 inches with most precipitation falling as snow (11.6 inches). March is the snowiest month, averaging 18.3 inches. (Dayweather 2012 http://dayweather.com/). The area experiences only 40-60 frost-free days per year and lies in the United States Department of Agriculture (USDA) Plant Hardiness Zone 4b.



Location Map

B. Ranch Description

The 4,000 acre Deerwood Ranch headquarters, barns, outbuildings and hay meadows are situated on the Centennial Valley floor at 7,936 feet elevation. The highest pasture, at the footslopes of the Snowy Range Mountains, lies at 8,498 feet. The Snowy Range Mountains and alluvial fans are a classic glacial range, evidenced by well drained soils with predominate rock features and cobble throughout the landscape.

Deerwood Ranch is divided into 11 large pastures ranging in size from 30 to 2,000 acres, and three smaller working pastures near headquarters ranging in size from three to 10 acres (See Map 4). All pastures provide a native grass mix, and vary greatly in topography. The various landscapes of Deerwood Ranch consist of open rolling uplands, irrigated lowland meadows, aspen groves, cottonwood galleries and stands of pure conifer (See Ecological Site Description Pictures).

C. Purpose and Need

This Environmental Assessment (EA) contains site-specific analysis of environmental impacts that will result from the implementation of the Proposed Action and No Action alternative. This EA will disclose information which will allow the Authorized Officer to determine whether to prepare an Environmental Impact Statement (EIS) or issue a Finding of No Significant Impact (FONSI). A FONSI documents justification for implementation of the selected alternative. That selection will not result in environmental impacts that significantly affect the quality of the human environment.

The purpose of the Proposed Action is to provide, humane long-term care for excess wild horses from Wyoming HMA's, in a natural setting that allows for free-roaming behavior, conserves the environment and health of the lands and broadens public education opportunities. The intent of ecosanctuary concept, as opposed to the BLM's typical long-term care facility approach, is to add economic incentives to the long–term pasture contracts that ensure a cost-effective program that will offset the typical costs to tax payers of long-term care of wild horses.

The need for the Proposed Action is to increase available long-term pasture capacity for care and maintenance of excess wild horses.

The safety and welfare of wild horses was carefully considered when the specifications for the working pastures and the requirements for feeding and care were developed for the Ecosanctuary Request for Application (RFA). This EA will focus on the RFA proposal to pasture wild horses on lands that have been historically used to pasture cattle and the possible environmental effects of changing grazing use from cattle to wild horses.

D. Scoping and Issues Identification

Public scoping was initiated when this project was posted on the RFO on-line NEPA register on April 1, 2012. Public scoping included mailing 277 scoping letters to interested parties and stakeholders. The scoping letter was also posted on the BLM Wyoming Website and made available in the RFO public room. Additionally some stakeholders were notified through individual telephone contacts. This project was also covered widely in local and national level media outlets.

Interdisciplinary team review identified the following resources with issues of concern that will and will not be addressed in this EA:

Resource Issues Check List:

Resources	Issues Present/Identified	No Issues Identified	Resource Not Present
Air Quality		✓	
Cultural		✓	
Vegetation Management	✓		
Invasive/Non-native Species	✓		
Visual Resource Management		✓	
Lands With Wilderness Characteristics (LWC)			✓
Water Quality	✓		
Watershed and Soils Management	✓		
Wilderness			✓
Forest Management		✓	
Fire and Fuels Management		✓	
Wildland Urban Interface		✓	
Livestock Management	✓		
Areas of Critical Environmental Concern (ACEC)			✓
Environmental Justice			✓
Floodplains			✓
Hazardous or Solid Waste			✓
Drinking/Ground Water Quality			✓
Land and Reality		✓	
Minerals		✓	
Native American Religious Concerns		✓	
Prime or Unique Farm Land			✓
Paleontology/Geology Management			✓
Socioeconomics		✓	
Transportation and Access Management		✓	
Wild and Scenic Rivers			✓
Wild Horse Management	✓		

E. Conformance with Land Use Plan

The Federal Land Policy and Management Act of 1976 (FLPMA) requires that an action under consideration be in conformance with applicable BLM land use plans and be consistent with other federal, state, and local laws and policies to the extent possible.

The placement of excess wild horses into private grasslands is not subject to the BLM land use planning regulations as land-use plans are specific to public rangelands. Removal of wild horses from public rangelands is consistent with the WFRHBA.

F. Statutes, Regulations, or Other Plans

Removal of excess wild horses from the public rangelands is required by the WFRHBA. The Proposed Action complies with the goals of the BLM Strategic Plan for the Management of Wild Horses and Burros on Public Lands, June 1992. These goals include perpetuating and protecting viable wild horse and burro populations and their habitat, and ensuring humane care and treatment of excess wild horses and burros.

In addition to the WFRHBA and FLPMA, the following statutes and regulations are of primary concern to this EA:

The National Environmental Policy Act of 1969, as amended.
National Historic Preservation Act, as amended.
Endangered Species Act of 1973, as amended.
Migratory Bird Treaty Act of 1918, as amended.

The Proposed Action does not conflict with any known State or local planning or zoning ordinance. This action is not specifically addressed in the Albany County plan; however, the proposal is consistent with the land uses occurring within the area (e.g., ranching and agriculture).

II. Proposed Action and Alternatives

A. Proposed Action

Proposed Action: To enter into a Cooperative Agreement (CA) for the care and maintenance of up to 300 excess wild horses on native grassland pastures on privately owned lands in Albany County, Wyoming. The Proposed Action will result in converting a cattle ranch operation into a wild horse ecosanctuary. Existing facilities, range improvements and construction of a wildlife friendly fence between Deerwood Ranch private property and United States Forest Service (USFS) lands (National Forest) are part of the Proposed Action. Wild horses maintained at the Deerwood Ranch will be geldings gathered from Wyoming HMA's.

Specifics of the Proposed Action include: (See Appendix 1 Request for Application (RFA))

Wild horses will be maintained in non-reproductive herds. Any age animal can be shipped into the facility, although mostly older, harder to adopt animals will be provided. Additional wild

horses will be brought in as existing wild horses (depending on age) are either shipped to adoption events, sold or die over the life of the CA.

Wild horses will be maintained on private land in pastures that are large enough to allow free-roaming behavior and that provide food, water and shelter necessary to sustain the animals in good condition.

Handling of wild horses and sorting of the animals through chutes, gates and corrals will be minimized to the extent possible.

Regular on-the-ground visual observations and weekly counts of the wild horses to ascertain their well-being and safety will be conducted.

The BLM staff is knowledgeable and experienced in wild horse behavior and nutritional requirements and will provide professional assistance to evaluate the management of Deerwood Ranch

Fund-raising activities that promote eco-tourism and attract visitors to the sanctuary will be considered.

Individual records for all wild horses will be maintained and provided to the BLM annually.

A disease abatement plan will be in place prior to arrival of the first wild horses and will include details on what actions will be taken in the event of an outbreak of disease.

A contingency plan will be in place to ensure wild horses remain in good condition during difficult weather events such as deep snow or prolonged drought and an evacuation plan will be in place in the event of a wildland fire that threatens the Deerwood Ranch.

Rangelands within the ecosanctuary will be managed to ensure that hydrologic, nutrient and biotic cycles, are maintained in order to support healthy watersheds, native biotic populations and communities for as long as wild horses remain on the ecosanctuary.

The establishment of the sanctuary will be in compliance with all federal, state, and local governmental law and/or ordinances.

During scoping, issues surfaced regarding wildlife and the adequacy of existing fencing, duration of the CA and veterinary care considerations. These issues are addressed in the conditions and specifics of the RFA (see Appendix 1).

The following specifications developed by the BLM will be included in the CA for the Deerwood Ranch ecosanctuary. The specifications have been established as the necessary standard-of-care to ensure the health and well-being of the wild horses. The CA requires the use of wildlife friendly fences for all pasture fences and short-term, acclimation and holding areas. Pastures will be large enough to allow free-roaming behavior, provide sufficient year-round forage (including native vegetation and/or feed supplements and supplemental feed, as needed), include natural shelter areas and areas with sufficient rock or gravel to provide for natural hoof wear and provide a year-round source of fresh water.

CA requirements include specifications on the construction of corrals, chutes and runways, and the requirements for pastures, supplemental feed, feed supplements, and water (See RFA, Appendix 1).

From the RFA:

Fences

i. Perimeter and division fences will be constructed to a maximum height of 42 inches. New fence construction will be required in order to completely enclose the Deerwood Ranch ecosanctuary. All fences will consist of four strands of barbed wire or other acceptable fencing materials and will be wildlife friendly.

ii. The recipient will flag certain fences with eight inches of suspended flagging attached to the top horizontal member of the fence every 20 feet to make the fences more visible to wild horses (or native wildlife). In some areas, existing fences will need to be reconstructed (modifications may include raising the bottom wire to 16-18 inches off the ground; use of a white, resin-coated top wire, use of smooth wire (in place of barbed wire) at key wildlife crossing points; use of extensive flagging or white Poly Vinyl Construction pipe attached to the top wire to increase visibility; or, the construction of gates or sections of let-down fence at key wildlife crossings and openings or letting down these sections when wild horses are not in the pasture.

iii. Gates, rather than cattle guards, will be used at all road crossings or fence openings.

In order to meet the requirements of the RFA, the Deerwood Ranch proposed ecosanctuary site will require modification of some existing fences and the construction of a temporary, wildlife friendly, electric fence between the ecosanctuary private property and USFS boundary prior to delivery of the wild horses. The boundary fence will be flagged with eight inches of flagging, as specified above.

RFA Specifications:

Period of Project Performance

CA specifies a period of project performance as: a cooperative agreement for one year with, the option for four additional years. CA can then be re-negotiated at the end of each successive five year period.

RFA Specifications:

Veterinary Services

All ecosanctuary approved wild horses will have current vaccinations upon arrival and will be shipped in accordance with State of Wyoming regulations. The recipient of the RFA will:

Provide boosters and vaccinations
Diagnose sick horses.
Treat sick and injured horses.

Issue health certificates for interstate shipment of animals
Provide in writing to the Project Office the probable cause of death of animals that die at, or en route, to the facility.
Humanely euthanize wild horses when necessary, and provide a written report to the Project Office.
Collect tissue samples for postmortem examination as directed by the Project Office.
Incinerate all wild horse remains.

In order to meet the specification of the RFA, Deerwood Ranch will have a veterinarian on call for the duration of the agreement.

Working corrals and smaller pastures will be utilized for acclamation and quarantine. Deerwood Ranch will implement an adaptive pasture management plan that includes a rotational grazing system that will enable growing season the rest of each pasture for the duration of the RFA.

Deerwood Ranch Entrance – Hay Meadow

Corrals and South End of Indoor Arena

Short warm summers and long winters will require Deerwood Ranch to provide supplemental feed in the form of native grass hay. Hay will be fed for approximately 167 days (5 ½ months) of the year during the fall and winter at a rate of 25 pounds/animal/day**.** The BLM long-term pasture protocol is to feed 25-30 pounds/horse/day for a 1000 pound wild horse. Grass hay will continue to be fed until sufficient snow melt has occurred and pastures are ready to be grazed. Hay will be fed on the ground and feeding locations will be moved often to minimize concentration of animals for any length of time.

Supplemental winter feeding will occur on the hay meadows in conjunction with the surrounding willows and cottonwood galleries once snow begins to fall. It is a common practice to turn livestock out on hay meadows following harvest. The remaining vegetation is referred to as "aftermath", which can have a high nutritional value. The willows and cottonwoods bordering each pasture provide natural thermal protection and help maintain open water.

Salt and mineral supplements will be provided and moved frequently to encourage movement of wild horses. Wild horses in their native habitat are accustomed to ranging long distances from water to find adequate forage.

Vegetation monitoring has been conducted on each of the major range sites. Utilization associated with grazing wild horses on the native pasture will be monitored to determine if pasture management practices need to be altered. Wild horse body condition will also be observed and recorded regularly and animals will receive additional feed, when needed.

Adequate fencing exists in the majority of the Deerwood Ranch pastures and along most of the perimeter of Deerwood Ranch. All fences will be modified to be wildlife friendly by Deerwood Ranch over the course of the agreement. A new, wildlife-friendly fence will need to be constructed between Deerwood Ranch private property and the USFS at the far west end of Deerwood Ranch (See Map 2). For the first year of the proposed ecosanctuary, Deerwood Ranch will install a temporary 1.25 mile, 2-wire high tensile lay-down electric fence, flagged as specified in the RFA before the wild horses arrive. This temporary fence will enable Deerwood Ranch personnel to complete wild horse counts and conduct behavior observation of the wild horses during the first year of ecosanctuary operation. The Deerwood Ranch pasture immediately adjacent to the USFS boundary has dense conifer stands and numerous aspen groves that provide sufficient cover to make weekly wild horse counts difficult. The electric fence will also provide a transition period for wildlife to become accustomed to the wild horses and a new fence.

The Natural Resource Conservation Service (NRCS) Albany County Soil Survey recommends that a fertilized, sub-irrigated, hay meadow should be able to produce an average of two tons per acre in a normal precipitation year (See Appendix 2). The Deerwood Ranch hay meadows have been producing 2 tons per acre annually for the last 10 years. The native rangeland ecological site descriptions in the NRCS Albany County Soil Survey are, therefore, assumed to be accurate for the production estimates (See Table 1). The mid-range of ecological site production figures for a normal year from the Albany County Soil Survey have been used to calculate available forage.

Table 1. Albany County Soil Survey Production

ESD	Component Name	Rating (lbs/acre/yr) Normal	% in Study Area	Rangland Productivity	Characteristic Vegetation	Whats' Really There
46 acres	Ansel-Granile gravelly sandy loams, 6-45% slope	N/A	1.15%	No Productivity		Rocky, rocky,rocky: the mountain
Shallow Igneous 67.7 acres	Poin-Bowen 10-50% slope	900	1.69%	N/A	Bluebunch, slimstem muhly, 3 tip Idaho fescue, winterfat	Aspen, poas, mtn mahog,bromes, snowberry, rose
Coarse Upland 1161.02	Greyback very cobbly sandy loam, 1-6% slopes	1300	29.00%	Favorable 1700 Normal 1300 Unfavorable 800	Bluebunch wheatgrass, Idaho fescue, Western wheatgrass, 3-tip sagebrush, spike fescue, needle-and-thread, mtn muhly, hood plox, fringed sage,	Aspen, poas, bromes,
Wetland 459.21	Cryaquolis, 1-9% slopes	5500	11.49%	Favorable 6500 Normal 5500 Unfav 4000	Tufted hair grass, Nebraska sedge , slough sedge, willows	Baltic rush, hair grass, fringe sage, poa, potenitlla
Coarse Upland 1161.01	Kildor-Rock Outcrop	1500	29.00%	Favorable 2000 Normal 1500 Unfav 800	Bluebunch wheatgrass, Idaho fescue, June grass, Griffith wheatgrass, Big sagebrush, 3-tip sagebrush	Threadleaf Sedge, needle leafe sedg, june grass, Ag ?, Fringe sage, chvi, phlox, buckwheat, bluebells, sedums
Loamy 193.14 acres	Lymanson loam-Lymanson cobbly loam complex 6-20% slopes	1425	4.82%	Favorable 2000 Normal 1500 Unfav 800	Bluebunch, Idaho fescue, junegrass, griffith wheatgrass, 3-tip Sadbrush, big sagebrush	Threadleaf Sedge, needle leafe sedg, june grass, Ag ?, Fringe sage, chvi, phlox, buckwheat, bluebells, sedums
Coarse Upland	Hanson-Quander complex, 3-15% slopes	1100	2.30%	Favorable 1400 Normal 1100 Unfavo 800	Bluebunch wheatgrass, Parry danthonia, 3-tip sagebrush, Griffith wheatgrass, black sagebrush	Native grass haymeadow
Shallow Igneous 67.7 acres	Poin-Bown-Rock outcrop complex 20-50%	900	1.69%	Favorable 1200 Normal 900 Unfavorable 600	Bluebunch wheatgrass,slimstem muhly, 3-tip sagebrush, Idaho fescue, griffith wheatgrass, winterfat	Tallis-slope
Shallow Loamy 922.8 acres	Rohonda-Cheadle-Rock outcrop association 6-45%	1100	23.00%	Favorable 1400 Normal 1100 Unfavo 800	Bluebunch wheatgrass, griffith wheatgrass, parry danthonia, 3-tip sagebrush, black sagebrush	Threadleaf Sedge, needle leafe sedg, june grass, Ag ?, Fringe sage, chvi, phlox, buckwheat, bluebells, sedums
Subirrigated 1251.08 acres	Silas loam, 1-6%	4000	31.20%	Favorable 4500 Normal 4000 Unfav 3300	Basin wildrye,Tufted hairgrass, slender wheatgrass, western wheatgrass, shrubby cinqfoil, willow	Hay Meadow

Table 2. Deerwood Ranch Production

SOIL CODE	*ESD*	*Project Area ACRES*	*% Proj Area*	*Soil Survey BOOK LBS/ACRE*	*PRODUCTION DEERWOOD 2 tons/acre*	*Tons / YEAR (2,000 lbs/ton)*
226	Hay Meadow	1251	31%	4000	4000 lbs /acre x 1251=5,004,000	2502
TOTAL		1251			5,004,000	**2,502 tons/yr**
227	Cottonwood Gallery	324	8%	4000	4000 x 324 =1,296,000	648
168	Coarse Uplands	1161	29%	1300	1300 x 1161= 1,509,300	755
143	Wetlands	459	11%	5500	5500 x 459 = 2,524,500	1262
186	Loamy	193	5%	1425	193 x 1425 = 275,025	137
223	Shallow Loamy	923	23%	1100	1100 x 923 = 1,015,300	507
TOTAL	Open Range Production	3060		13325	TOTAL OPEN RANAGE FORAGE	**3309**
					TOTAL HAY	**2502**
					TOTAL PRODUCED	**4,811**

Table 3 - Total Required Forage

	Summer Grazing Requirements				Winter Hay Requirements		
Horses	**1 Horse = 1.25 AUM's**	**Pounds of Forage per Horse (780 x 1.25)**	**Total lbs Forage Required per Month**	**Tons Required per Month**	**Total lbs. Hay Required per Month @ 25 lbs/ day/horse**	**Tons of Hay per Month**	**Tons for 5 Mos - Winter Tons**
300	375.0 AUM's	975	292,500	146	225,000	112.5	562.5

*1 AUM = 780 lbs. forage

1000 LB HORSE, NEEDS 25 LBS/DAY/HORSE FOR 5 MONTH-WINTER IN CENTENNIAL, WY

Due to the seasonality of Deerwood Ranch, it is necessary to compute production based on winter feeding (Hay- five months) and summer (Open Range – 7 months) grazing. Open range grazing includes the grazing of all lands not in hay production, along with the hay meadows, (following harvest) including the surrounding willows-cottonwood galleries in the fall.

Table 4 - Hay Requirements for Winter Feeding

Horses	**Total lbs. Hay Required per Month 27 lbs/ day**	**Length of Time Feeding Months**	**Pounds Hay Consumed**	**Tons of Hay feed Winter**	**Average Hay Produced on Ranch in Tons**	**Extra Hay Produced Tons Per Year**	**% Hay In Reserve**
300	225,000	5	1,125,000	562.5	1,000	438	**43.8%**

Table 5: Open Range Forage Requirements								
Horses	Total LBS Forage Required per Month LBS	Length of Time Feeding Months	Pounds Forage Grazed	Tons of Forage Grazed for the Year	Average Open Range Production on the Ranch in Tons	Forage Available at 50% utilization	Extra Forage Tons Per Year	% Forage in reserve
300	292,500	7	2,047,500	1023.75	3,309	1654.5	631	**38.1%**

The standard range management guiding principle of 'leave half-take half', will be the ultimate determining factor of the environmental capability of Deerwood Ranch to support up to 300 horses. (www.ext.colstate.edu\sam\pasture.html)

Unlike other long-term pasture arrangements entered into by the BLM, this high elevation, mountain ecosanctuary functions within a narrow ecological range dictated by weather. Judicious range and ranch management guidelines strongly encourage stocking rates that do not exceed forage production levels available in the worst growth years. The normal limit of each ecological site rangeland production value for the NRCS Albany County Soil Survey on Deerwood Ranch shown in Table 1 (Production Estimates) have been used to calculate the availability and reliability of both hay and forage produced on the Deerwood Ranch. Total non-hay forage production for all range sites and irrigated meadow is 3,309 tons of forage. The ability to be self-sustaining depends on yearly hay production. According to those figures the hay in reserve for this area can be expected to be 43.8% (from Table 4).

Open range forage over the non-hay meadow portions of the ranch can be expected to maintain 631 tons of forage leaving 38% in reserve (Table 5). As half of the forage has already been accounted for, this amount provides a conservative target to manage towards. In addition, Hay meadow after math, (according to NRCS Pasture and Hayland Interpretations Chart, August 2004) in a 12-14" precipitation zone, on Grass Hay Aftermath production fertility level is .2 AUM's/acre for an average year. Combining acreage from hay meadows and cottonwood gallery sites (1,575 acres) and converting AUM's to pounds of forage (780 lbs./AUM) aftermath contributes another 122.85 tons of open range forage to the calculated 131 tons available at 50% utilization, for 253 tons of open range forage left for the coming year .

B. No Action Alternative

The No Action alternative is to not issue a CA for the care of excess wild horses on the privately controlled lands of Deerwood Ranch in Albany County, Wyoming. Deerwood Ranch has traditionally been used to accommodate 450 mother cows year round (calving, weaning and maintenance of mother cows) through a lease agreement. Deerwood Ranch has not owned its own cattle since 2010. The No Action alternative will continue management of Deerwood Ranch at the private landowner's discretion.

Excess BLM wild horses removed from public rangelands will either be sent to other contracted long-term grassland pastures or will be cared for in short-term facilities that provide an average of up to 400 to 600 square feet/animal.

Comparison of Alternatives

Alternative	Table 6 - **Forage Requirements for Open Range Grazing**								
	Horses	Total Forage Required per Month	Length of Time Feeding Months	Pounds Forage Grazed	Tons of Forage Grazed for the Year	Average Forage Production on the Ranch	Forage Available at 50% utilization	Extra Forage Tons Per Year	% Forage in reserve
Alt 1	400	390,000	7	2,730,000	1,365	3,309	1655	290	**17.5%**
Proposed	300	292,500	7	2,047,500	1023.75	3,309	1655	631	**38.1%**
Alternative 2	250	243,750	7	1,706,250	853.125	3,309	1655	802	**48.5%**

Alternative	Table 7 - **Hay Requirements for Winter Feeding**							
	Horses	Total lbs. Hay Required per Month 27 lbs./ day	Length of Time Feeding Months	Pounds Hay Consumed	Tons of Hay feed Winter	Average Hay Produced on Ranch in Tons	Extra Hay Produced Tons Per Year	% Hay In Reserve
Alt 1	400	300,000	5	1,500,000	750	1,000	250	**25.0%**
Proposed	300	225,000	5	1,125,000	562.5	1,000	438	**43.8%**
Alternative 2	250	187,500	5	937,500	468.75	1,000	531	**53.1%**

C. Alternatives Considered and Eliminated from Detailed Analysis

1. Alternative 1 Provide long-term care and maintenance for up to 400 excess BLM wild horses

The original Proposed Action, this alternative included entering into a Cooperative Agreement (CA) for the care and maintenance of up to 400 excess wild horses on native grassland pastures on privately owned lands in Albany County, Wyoming. The Proposed Action would result in converting a cattle ranch operation into a wild horse pasture facility using existing facilities and range improvements including the construction of a wildlife friendly fence between Deerwood Ranch private property and the USFS lands. Wild horses maintained at the Deerwood Ranch will be geldings gathered from Wyoming HMA's.

The geographic location of the proposed ecosanctuary requires Deerwood Ranch to function by balancing narrow ecological limits dictated by weather. Production potential of the various ecological sites and records of actual hay production from Deerwood Ranch were closely examined. During scoping it was pointed out the available acreage for 400 horses may be insufficient. Along with consideration of the management principles of managing for the most challenging conditions, and the 'leave half take half' principle, predicted forage amounts in reserve were unsustainable over the long-term and, therefore, this alternative was eliminated from further detailed analysis.

2. Alternative 2 Provide long-term care and maintenance for up to 250 excess BLM wild horses

Contract for a 250 wild horse native grassland pasture ecosanctuary on privately owned lands in Albany County, Wyoming to care for excess wild horses. The Proposed Action would result in converting a cattle ranch operation into a wild horse pasture facility using existing facilities and range improvements including the construction of a wildlife friendly fence between Deerwood Ranch private property and United States Forest Service (USFS) lands.

Under this alternative, the 250 wild horses delivered to the ecosanctuary would be an appropriate starting point for the first year of the ecosanctuary proposal. Both expected hay production in reserve and open range forage in reserve are ample. However, meeting the stated need for the Proposed Action "to increase available long-term pasture capacity for care and maintenance of excess wild horses" can be better served by evaluating the optimal number of wild horses Deerwood Ranch could sustain over the long term. This alternative was eliminated from detailed analysis.

III. Affected Environment

A. Vegetation

1. Soils and Ecological Sites

General vegetation communities on the Deerwood Ranch consist of six different ecological sites, ranging from cottonwood gallery to coarse uplands to pure conifer stands (See ESD Production Chart).

Ecological site descriptions are used to stratify the landscape and organize ecological information for purposes of monitoring, assessment, and management. An ecological site, as defined for rangeland, is a distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation. (USDA, NRCS Ecological Information Site http://esis.sc.egov.usda.gov). Six different ecological sites exist on Deerwood Ranch: hay meadow, sub irrigated meadow, coarse uplands, wetlands, loamy, shallow loamy. These various ecological sites provide a starting point for describing Deerwood Ranch Ecosanctuary soils.

The proposed native rangeland pasture ecosanctuary will be located in an area where the soils series are classified as Borollic Cambothid soils in the subirrigated meadow ecological site (226); Cryquolls with small areas of Granile gravelly sandy loam and Leavitt sandy loam in the 'wetland' ecological site (143) ; Lymanson loam - Lymanson cobbly loam with small areas of Buffork sandy loam and Leavitt sandy loam in the Loamy ecological site (186); Rohonda-Cheadle-Rock outcrop association in the shallow-loamy ecological site (223) and the coarse uplands (168) consist of Greyback very cobbly sandy loam with many small areas of Hanson sandy-loam and Silas gravelly loam in the coarse uplands ecological site (168). These soil units are used primarily for rangeland pasture and irrigated hay pastures. The soils in the uplands and lowland areas appear stable and are meeting production predictions.

The following are pictures of the various ecological sites on Deerwood Ranch:

Shallow Loamy

Wetlands

Coarse Uplands

Sub Irrigated (Hay Meadow)

Sub-Irrigated Cottonwood Gallery

More than one-third of Deerwood Ranch rangelands (1,161 acres or 30 percent) consist of coarse uplands. This very deep, somewhat excessively drained soil is found on glacial outwash alluvial fans, back slopes and toe slopes of mountains and outwash, fan terraces. Typically this surface of this course upland ecological site is 30 percent or more cobble and stone and also found on back slopes and toe slopes of

mountains, and outwash fan terraces. Vegetation consists of threadleaf sedge, needle leaf sedge, june grass, bunchgrass, fringe sage, green rabbit brush, phlox, buckwheat, bluebells, and sedums.

The wetland ecological site (459 acres or 11.5 percent) is found in the transition area between the cottonwood gallery ecological site and the coarse upland sites at the base of the Snowy Range Mountains. The Wetland ecological site is a very deep and poorly drained soil, formed in alluvium. It is supported by a wide variety of different soil types. A completely flat meadow-appearing area, it's deceptively complex in its vegetative diversity. Shallow drainages running throughout the meadows, create considerable wildlife edge-niche habitat here. Sagebrush, cinquefoil and, rabbit brush-both green rabbit and rubber rabbit brush can be found on Deerwood Ranch, in strips and islands throughout the meadows. Meadows consist primarily of Baltic rush, bluegrass, and thread leaf sedge along with some true sedges, tufted hair-grass, and occasionally basin wild rye in the shallow drainages and swales.

The loamy ecological site (193 acres or 4.8 percent) is a moderately deep and well-drained soil, formed in residuum and alluvium derived primarily from sedimentary rock. Found on the open ridges and escarpments and adjacent swales (923 acres or 23 percent), vegetation consists of Bluebunch wheat grass, Idaho fescue, june grass, griffith wheatgrass, 3-tip sagebrush, and big sagebrush.

The sub-irrigated bottomlands were formed over very deep, somewhat poorly drained soil on outwash terraces. Formed in alluvium derived predominantly from granite sources, the sub-irrigated sites support the only improved pastures on the ranch. The Deerwood Ranch sub-irrigated pastures produce native grass hay which is periodically fertilized and commercially sold. Native vegetation here would consist of Basin wildrye, Tufted hairgrass, slender wheatgrass, western wheatgrass, shrubby cinqfoil, and willows.

Deerwood ranch can generally be described as existing in three general elevation zones. Working from the valley floor and gradually rising toward the Snowy Range Mountains, the headquarters and hay meadows lie in the lower elevation bottomlands, the wetland meadow and shallow-loamy foothills and escarpments lie in the middle elevation country, and the rolling coarse uplands and aspen groves lie at the higher elevations against the footslopes of the Snowy Range (see pictures).

The bottomlands (1,251 acres 31percent) consist of the ecological site referred to as sub irrigated with very deep, somewhat poorly drained soil on outwash terraces. Formed in alluvium derived dominantly from granite sources, these are the only improved pastures on Deerwood Ranch, as they produce native grass hay which is periodically fertilized and commercially sold.

Starting at an elevation of 7,800 feet, the hay meadows consist of a Silas loam with many small areas of Borollic Cambothids soils. The glacial evolution of the valley is quite clear here, with the numerous tributaries and obvious surrounding lateral and terminal moraines. Permeability of Silas soil is moderate and available water capacity high. These soils make for excellent hay meadows, despite the presence of many very gravelly mounds. These soils are well suited to production improvements, if treated conservatively. Production here can be expected to run 4500 pounds/acre in favorable conditions and 3300 lbs./acre during unfavorable conditions (Albany County Soil Survey, 1998). Deerwood ranch, lying in the 4b hardiness zone produces on average two tons/acre (up to 3000lbs/acre).

Moving up valley, around the 8000-8500 feet elevation zone, there are several tributaries and lateral ditches bordered by willows, transitioning to mature cottonwood galleries as elevation increases. Soils here consist of Greyback very cobbly sandy loam. The cottonwood galleries consist of narrow leaf cottonwood, rocky mountain alder and birch, currants and rocky mountain maples as the elevation

increases. There is little to no livestock forage within these riparian areas; however, they provide considerable hiding and thermal cover for big and small game and a thriving avian population. Permeability of soils is rapid, available water capacity is very low, effective rooting depth is 60 inches or more.

As elevation increases, topography becomes rougher and supports a scattered mixed shrub community. Primarily mountain mahogany, snow berry, currant, bitter brush, creeping juniper and the occasional service berry bush are found here. Intermixed are open grassland consisting mainly of bluebunch wheatgrass, western wheatgrass, June grass and three-tip sage. There is a great deal of threadleaf and needleaf sedge as well.

Against the foot of the Snowy Range Mountains consist of coarse uplands and shallow igneous swales. These soils are very deep and well drained, formed in glacial outwash overlying glacial till. Permeability is moderate, as is available water capacity. Potential plant community consists of wheatgrasses, june grass, threadleaf and needle-leaf sedges as well as several cushion plant type species; stonecrop, goldenweed, phlox and fringed sage. Green rabbit-brush, horse brush and mountain sage is scattered across this landscape as well. Production varies from 800 to 1,400 pounds per acres.

2. Invasive Weeds

Invasive weeds found on the Deerwood Ranch include Dalmation toadflax, Canada and Musk thistle and houndstongue. Pastures near the house and barns, as well as along the abandoned railroad track, are treated by the county to control Dalmation toadflax and houndstongue. There is currently no weed control plan for the rest of the ranch.

3. Riparian Areas and Wetlands

The following discussion of riparian areas and wetlands is based on the National Wetland Inventory Mapping conventions developed by the U. S. Fish and Wildlife Service (USFWS) (See Map 5).

The National Wetlands Inventory for the Deerwood Ranch ecosanctuary identified three different kinds of wetlands; these included freshwater emergent, freshwater forested/shrub and freshwater pond.

The Middle Fork of the Little Laramie River (Middle Fork) and its several tributaries run through Deerwood Ranch (see map 2). Hells Canyon Creek and Curitan Creek join the Middle Fork near the National Forest boundary and continue through the lower hay meadows. Both streams are high gradient, well armored systems which carry large pulses of runoff and snowmelt in the spring and become small rivulets by late June or sooner in dry years. The condition of these streams, numerous seeps, and bogs on the ecosanctuary was evaluated by the BLM ecosanctuary Interdisciplinary Team (IDT) using the BLM Proper Functioning Condition Assessment methodology. Both lentic (standing or diffused waters) and lotic (flowing) water evaluations were conducted in the three different USFWS wetland types identified by the National Wetlands Inventory.

The higher elevation f*reshwater forested/shrub* systems were evaluated as Functioning at Risk due to impacts from repeated elk use. The assessment concluded that elk are grazing new growth as snow melts off these locations in the early spring.

The main fork of the Middle Fork was the representative example of the *Forested and Emergent wetlands* systems evaluated. Numerous tributaries that branch off the Middle Fork have been modified into irrigation conduits near the middle elevations of the Ranch, and therefore, not appropriate for evaluation. Towards the lower elevation hay meadows, the Middle Fork and irrigation systems become more defined. Middle segments were a mix of irrigation and tributaries in a classic cottonwood gallery setting with all the anticipated grass, shrub and tree components. In the sub-irrigated meadows of the ranch, evaluations indicated a Properly Functioning system as well. As flows are regulated by irrigation, natural willow and the occasional water-birch along with obligate sedges and forbs were present. Banks were stable and the system was maintaining its width-depth ratio.

The freshwater pond is a manmade feature with a dyke and is fed solely by runoff. This is a deep cone shaped feature toward the bottom end of drainage in the middle of the largest pasture, and rated as Properly Functioning.

B. **Cultural Resources**

A file search through the Cultural Records Office of the Wyoming State Preservation Office database was conducted for the 4,000 acre Deerwood Ranch. Through this search, the historic Deerwood Ranch, the Wyoming-Colorado Railroad, the Centennial Ridge Mining District and associated properties were identified.

A Class III cultural resource inventory was conducted for the proposed fence location. During this inventory, one historic isolate was identified. The Wyoming-Colorado Railroad is an eligible property for the National Register of Historic Places and the site's view-shed is an important aspect of its integrity. A view-shed analysis was conducted to determine potential impacts and resulted in a determination of no adverse effect to the cultural property.

C. **Recreation and Visual Resources**

During the summer months, a neighboring family dude ranch conducts horseback and van tours of the Deerwood Ranch for the purpose of viewing a working ranch. This dude ranch hosts an international crowd, along with many regular returning guests. Deerwood Ranch offers one guest cabin for weekend, weekly or monthly stays and hosts several regular guests. Ranch tours conducted on horseback and by all-terrain-vehicles or pick-up trucks are offered along with bird-watching, fishing and hiking. In the fall, the Deerwood Ranch provides guided hunting (big game), fall color watching and photography. Winter recreation consists of groomed cross-country ski trials and the guest cabin is frequently rented by snowmobilers who use the cabin as a base for riding the many trails throughout the Snowy Range Mountains.

The viewshed lies within a Visual Resource Inventory Class III Scenic Quality Rating Unit and is currently managed, on public lands, under the Visual Resource Management Class III designation. The Deerwood Ranch is bordered by other private land, State of Wyoming land and the Medicine Bow-Routt National Forest. The Deerwood Ranch includes many ranching and residential improvements along with roads and two-tracks.

D. Water Resources

The project area lies within the North Platte River watershed and contains reaches of the Little Laramie River, Curitan Creek, Hells Canyon Creek as well as their respective tributaries. These three perennial water bodies are all classified as 2AB streams by the Wyoming Department of Environmental Quality WYDEQ (2001). Water bodies classified as 2AB support all use designations including drinking water, game fish and fish consumption. In addition to the natural drainage networks, there are also anthropogenic irrigations systems in the project area that support hay production. Current influences on water resources include cattle grazing and hay production related irrigation.

Water sources vary in availability, but are plentiful from the many small and various tributaries of the Middle Fork of the Little Laramie River. Flows from springs, seeps, and wells vary from several gallons/minute to just a wet spot a few feet in diameter. Near the Snowy Range Mountains and drier areas of Deerwood Ranch, water will run from a few feet to a quarter mile before drying up, whereas at higher elevations water flows may augment perennial waters. Water quality of perennial sources is generally good and supports use by wildlife, livestock and supports riparian habitat. There is one developed gravity fed pond in one of the larger upland pastures.

E. Wild Horses

Excess wild horses removed from public rangelands are kept in short-term holding facilities. Animals can be adopted (usually younger aged animals or animals with color) or sold (11 year and older animals). Short-term holding facilities receive wild horses following the BLM wild horse gathers and BLM staff freezebrand, vaccinate, de-worm, and acclimate the wild horses to alfalfa and grass hay. In both short-term and long-term grassland pastures animals receive all the food, water, feed supplements and supplemental feed they need to maintain body condition. The major difference is the amount of space for each animal. In short-term holding facilities, a wild horse has an average of 400 square feet of space and on the grassland pasture facility; a wild horse has an average of five to eight acres. The long-term grassland pastures have natural, topographic features and trees that provide shelter for wild horses. Gravel and rock provide natural hoof trimming.

There are currently over 13,200 wild horses in short-term holding facilities. The BLM anticipates there is an adoption/sale demand for approximately 2,500 wild horses. The remaining 10,700 wild horses are excess animals that require some sort of long-term care. At present, there are over 33,400 wild horses in BLM-contracted grassland pasture facilities with space for an additional 900 animals. The BLM requires additional long-term grassland pasture facilities nationwide for the excess wild horses already in short-term holding facilities as well as for those additional wild horses scheduled for removal from BLM HMAs.

F. Wildlife and Fisheries

Endangered, Threatened and Proposed Species
Any projects that occur on federal, state, or local public lands, or include any government actions must consider effects to federally-listed species.

There are 17 endangered, threatened, or proposed wildlife species that may be found, or have the potential to be found, within the RFO area. After a field review, it was determined that habitat is not present or impacts will not occur to the following species: black-footed ferret (*Mustela nigripes*), blowout

penstemon (*Penstemon haydenii*), Canada lynx (*Lynx candensis*), Colorado butterfly plant (*Gaura neomexicana coloradensis),* preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute ladies' tresses (*Sprianthes diluvialis*), Wyoming toad (*Bufo baxteri*), and the yellow-billed cuckoo (*Coccyzus americanus*). In addition, the project will not cause a water depletion; therefore, it will have no effect on the Colorado River species--humpback chub (*Gila cypha*), razorback sucker (*Xyrauchen texanus*), Colorado pikeminnow (Ptychocheilus lucius) and bonytail chub (*Gila elegans*) and the Platte River species—whooping crane (*Grus Americana*), Interior least tern (*Sterna antillarum*), pallid sturgeon (*Scaphirhynchus albus*), Western prairie fringed orchid (*Platanthera praeclara*), and the piping plover (*Charadrius melodus*). Therefore, the proposed project should have no effect on endangered, threatened, and proposed species found, or having the potential to be found, within the RFO area.

Sensitive Species

Wildlife species that are not listed as threatened or endangered under the Endangered Species Act (ESA), but may be rare or declining within the state, have been included on the BLM Wyoming Sensitive Species Policy and List (BLM 2010). The intent of the sensitive species designation is to ensure that actions on the BLM-administered lands consider the welfare of these species and do not contribute to the need to list any of these species under the provisions of the ESA (BLM 2010). Sensitive species that may occur in the project area are listed in the following table.

Table 8.- Sensitive species likely to occur near proposed project sites		
Common Name	Scientific Name	Status
Mammals (4)		
Townsend's Big-eared Bat	Corynorhinus townsendii	Wyoming BLM Sensitive
White-tailed Prairie Dog	Cynomys leucurus	Wyoming BLM Sensitive
Long-eared Myotis	Myotis evotis	Wyoming BLM Sensitive
Fringed Myotis	Myotis thysanodes	Wyoming BLM Sensitive
Birds (11)		
Sage Sparrow	Amphispiza belli	Wyoming BLM Sensitive
Burrowing Owl	Athene cunicularia	Wyoming BLM Sensitive
Ferruginous Hawk	Buteo regalis	Wyoming BLM Sensitive
Greater Sage-grouse	Centrocercus urophasianus	Candidate
Mountain Plover	Charadrius montanus	Wyoming BLM Sensitive
Bald Eagle	Haliaeetus leucocephalus	Wyoming BLM Sensitive
Loggerhead Shrike	Lanius ludovicianus	Wyoming BLM Sensitive
Long-billed Curlew	Numenius americanus	Wyoming BLM Sensitive
White-faced Ibis	Plegadis chihi	Wyoming BLM Sensitive
Sage Thrasher	Oreoscoptes montanus	Wyoming BLM Sensitive
Brewer's Sparrow	Spizella breweri	Wyoming BLM Sensitive
Amphibians (2)		
Northern Leopard Frog	Rana pipiens	Wyoming BLM Sensitive
Western Boreal Toad	Bufo boreas boreas	Wyoming BLM Sensitive
Plants (2)		
Limber Pine	Pinus flexilis	Wyoming BLM Sensitive
Laramie False Sagebrush	Sphaeromeria simplex	Wyoming BLM Sensitive

White-tailed Prairie Dog
During field visits, no defined prairie dog towns were found in the project area

Amphibians
Amphibians are important components of many ecosystems, occupying key positions in the food webs of aquatic systems (Blaustein, *et al.* 1995). Four species of amphibians have the potential to occur within the project area and associated riparian areas. These include boreal toad, boreal chorus frog, northern leopard frog and tiger salamander.

Bats
There are three BLM Wyoming Sensitive Species of bats that have the potential to occur within the project area. They are the long-eared myotis, fringed myotis and Townsend's big-eared bat. Although these species usually inhabit caves and or abandoned mines, they have the potential to forage for insects in riparian areas. Because mist-netting to identify bat species and numbers has not occurred, there is the potential for bats to be present within the area.

Migratory Birds
Long-billed curlew and white-faced ibis are BLM sensitive species that may be observed in riparian areas, particularly wet meadows. The sage thrasher, Brewer's sparrow, and sage sparrow are the BLM sensitive species that may occur in the habitats that make up the Deerwood Ranch. All of these species are associated with sagebrush habitats, which are found within the area affected by the Proposed Action. Sagebrush provides breeding, nesting, and brood rearing habitat for Brewer's sparrows, sage thrashers, and sage sparrows. Mountain plover have not been documented in proximity to the proposed project but potential habitat is present in the area.

Predators and Furbearers
Furbearers and predators known or likely to occur in the area include coyote (*Canis latrans*), American badger (*Taxidea taxus*), black bear (*Ursus americanus*), mountain lion (*Puma concolor*), red fox (*Vulpes vulpes*), long-tailed weasel (*Mustela frenata*), American mink (*Mustela vison*), striped skunk (*Mephitus mephitus*), and bobcat (*Lynx rufus*). All of these species are adapted to a wide range of grassland, woodland and shrubland habitats.

Raptors
During field visits to the project area, one raptor nest was located along the Middle Fork of the Little Laramie River. The nest was adjacent to the main access to the Deerwood Ranch and was inactive. The nest was likely constructed by a red-tailed hawk (*Buteo jamaicensis*). There are no known raptor concentration areas within proximity of the proposed project area. However, there is a potential for raptors to migrate through the area, actively feed within the project are and/or construct nests in the future.

Sage Grouse
There are two historic Greater Sage-Grouse leks located just over two miles from the project area. The project is located over 15 miles from the nearest active Greater Sage-Grouse leks.

Big Game
Elk, moose, mule deer, and pronghorn occur within, and around, the project area. The proposed action occurs within elk herd unit 533 (Snowy Range Herd Unit), moose herd unit 545 (Snowy Range/Sierra Madre Herd Unit), mule deer herd unit 539 (Sheep Mountain Herd Unit), pronghorn herd unit 527 (Centennial Herd Unit). The project area provides habitat for elk, moose, mule deer, and pronghorn for various life stage requirements. In addition, the project area contains approximately 90 acres of habitat classified as crucial winter range for mule deer along the east side of the Deerwood Ranch project area.

IV. Environmental Consequences

A. **Vegetation**

Proposed Action

Impacts to native vegetation are likely to be similar to those that occur from cattle grazing. Plant densities, diversities, and production rates would be maintained. Employing a rotational grazing system that practices principles of adaptive management, i.e. adjusts for weather conditions, use by big game and behavioral tendencies, along with the take half-leave half management prescription, can be expected to maintain plant vigor and vegetation condition and potentially improve overall rangeland health. Horses clip forage when grazing and use higher ground more so than cattle. Wild horses also don't concentrate

as much in riparian areas, decreasing riparian use from the No Action Alternative. In the hay meadows and lowlands, plant utilization would be similar to the No Action Alternative, as the season of use, number of animals and method of use would be the same. Use would occur in the fall and winter, when plants are dormant and the ground is frozen as a result plant densities, diversities, and production rates would be maintained.

No Action Alternative

Under the existing practices described in the No Action alternative, the composition, density and productivity of the Deerwood Ranch would be maintained. The ranch would continue to be managed by the private landowner as presently exists.

1. Soils

Proposed Action

In the hay meadows and lowlands, compaction and erosion issues would be similar to the No Action Alternative, as the season of use, number of animals and method of use would be the same. Use would occur in the fall and winter, when plants are dormant and the ground is frozen as a result soil compaction and erosion would remain the same.

While impacts to the upland pastures are likely to be comparable to those occurring from cattle grazing. Over one third of the ranch is comprised of coarse uplands. These consist of deep, well drained, generally very rocky and topographically diverse soils that are not susceptible to compaction and impacts would be minimal from grazing wild horses. Soils here consist of Greyback very cobbly sandy loam, although adjacent to water the soil permeability is rapid and soils are well drained.

In the cottonwood galleries soils here consist very cobbly sandy loam, adjacent to water the soil permeability is rapid and soils are well drained. These areas also have a great deal of fallen logs and tall willows, so long periods of utilization are unlikely. Increased compaction and erosion is not likely to occur.

No Action Alternative

The impacts under the No Action alternative would be similar to those for the Proposed Action as cattle grazing would still be expected to occur. Deerwood Ranch soils generally all have good drainage, with low susceptibility for compaction due to the cobble, gravel and larger sand particles.

2. Invasive Weeds

Proposed Action

A weed management plan would be designed that recognizes and specifically targets the growth characteristics and management requirements of the different noxious weeds on the Deerwood Ranch. Herbicide treatment of Dalmatian toadflax has been conducted along the abandoned railroad tracks by Albany County in the past. The frequency and abundance of the plants would be monitored and treated prior to wild horses being rotated into the pastures which the railroad runs through. In all pastures, the

potential for introduced species (noxious weeds) to spread or increase because of wild horse grazing, management activities and public viewing can be controlled through periodic monitoring and treatment. Weed control and abatement would be an integral part of an adaptive grazing management plan.

No Action Alternative

Under the No Action alternative cattle would continue grazing under current ranch practices and the CA for the wild horse ecosanctuary would not be issued. Dalmatian toadflax along the railroad tracks would continue to be controlled by Albany County Weed and Pest.

3. Riparian Areas and Wetlands

Proposed Action

Wild horses and horses in general, unlike cattle, do not tend to hang around riparian areas and are accustomed to traveling long distances between watering sources. This may improve plant vigor and perhaps species composition within riparian habitats. It is expected the wild horses would break off into small bands and not graze together as one large herd. During the spring, when snow runoff tends to happen quickly and briefly, riparian and wetland pastures would need to be monitored to discern best time for use – as it can fluctuate widely from year to year, depending on snow accumulation.

During the BLM IDT Proper Functioning Condition assessments, the higher lentic seeps and bogs rated Functioning at Risk, due to wildlife. Deerwood Ranch has 11 pastures to rotate use through during the year. This ability to vary duration and timing of use provides the opportunity to reduce impacts, pitting and root damage, of grazing wet or inundated higher seeps and bogs. Given the adaptive management goal of growing season rest for all but one pasture at a time in the rotation, avoiding use of the highest pasture in the rotation until the ground hardens can be practiced. Mitigating measures would be to monitor range readiness to know when pastures are firm enough to allow grazing by the wild horses.

No Action Alternative

Under the No Action alternative cattle would continue grazing under current ranch practices and the CA for the wild horse ecosanctuary would not be issued.

B. Cultural Resources

Proposed Action

Through the cultural inventory, no historic properties which would be adversely affected by the proposed project were identified. Switching the land use from cattle to horses would have no effect to cultural resources. Key observation point assessments confirmed that no view-sheds would be adversely affected by the proposed action (See Appendix 3).

No mitigation measures are required.

No Action Alternative

Under the No Action alternative, there would be no effect to cultural resources.

C. Recreation and Visual Resources

Proposed Action

The proposed action would increase recreation activities and the number of visitors that would enter the Deerwood Ranch. Paths for hiking and horseback riding would see an increase in use and could potentially realize some minor increase in erosion. However, given that the soils are very well drained and armored alluvial outwash, the likelihood of significant impacts from increase foot or hoof traffic is low. Existing recreation uses of the ranch would not differ from present use in the type of activity, only the amount of activity. Tourists routinely visit Wyoming from around the country to view wild horses. Only a minor increase in traffic would be expected, and controlled, in order to maintain the unique recreational experience due to the popularity of wild horse viewing in the region.

The Deerwood Ranch landscapes' ability to absorb some additional man-made structures is moderate. The existing ranch structures of the historic Deerwood Ranch add to the value and quality of the landscape. Additionally, the varied topography and the range of vegetation would contribute to screening any future, man-made structures. The construction of additional barbed wire fences with flagging and white wires (top wire) would decrease the visual value of the landscape by creating linear contrast on the landscape; however, the visual contrast, created by this structure, would be low and would not be a significant impact to this VRI Class III Scenic Quality Rating Unit.

While visitor numbers and access can be closely monitored and controlled on the privately owned lands of Deerwood Ranch, several mitigating measures are recommended:

It is recommended that public access to the ecosanctuary be structured to educate and inform visitors regarding the reduction of impacts to natural resources. It is recommended that the ecosanctuary provide interpretive opportunities concerning management and impacts to wild horses. This interpretation should provide public awareness to reduce potential conflicts among the public concerning the proposed action. For example, the public should be informed about the competition for forage between wild horses and other wildlife species.

It is recommended that visitor use be monitored to tightly regulate numbers and reduce congestion in the area. Any development of metal structures or facilities should be non-reflective Covert Green (selected from the BLM Standard Environmental Color Chart CC-001, June 2008).

No Action Alternative

As Deerwood Ranch is entirely composed of private lands, recreation is limited by the private land owner. The current use of Deerwood Ranch for recreation includes guided trips (once a week) from a nearby guest ranch. Recreationists could possibly access the adjacent Forest Service lands on the east side by foot. Deerwood Ranch can be viewed by the general public from the Forest, but there is no public access on Deerwood Ranch itself. Under the No Action alternative cattle would continue grazing under current ranch practices and the CA for the wild horse ecosanctuary would not be issued.

D. Water Resources

Proposed Action

The impacts of grazing wild horses are likely to be comparable to those that occur during cattle grazing. However, there is evidence (Plumb, *et al.*, 1984) that wild horse use would result in a smaller percent loss of vegetative cover within 15miles of a water source. Greater retention of stream bank vegetation would aid in bank stability, cooling and improved aquatic habitat conditions. The primary source of water is directly from snow fall. Perennial streams and irrigation water run primarily in well armored high gradient streams. The subirrigated pastures have developed under a regulated flooding regime which could be altered to meet Ranch needs, but are likely to remain unchanged from current seasonal Ranch operations. Under a rotational grazing system, providing for partial to full deferment of each pasture annually to maintain plant vigor, and the commitment of take half-leave half, impacts from the proposed action may be less than under existing cattle grazing.

No mitigating measures are required.

No Action Alternative

Under the No Action alternative cattle would continue grazing under current ranch practices and the CA for the wild horse ecosanctuary would not be issued.

E. Wild Horses

Proposed Action

Impacts to the wild horses would occur from transportation while being conveyed from short-term holding pasture and during the acclimation process once they arrive. Approximately 33 to 36 head of horses are delivered at a time depending on the size of the wild horses. Wild horses are rested at another short-term facility if the trip exceeds 24 hours. When the wild horses arrive at the ecosanctuary they would be off-loaded and put into acclimation pens. They would remain there for ten days to two weeks to adapt to their new surroundings. After two weeks the wild horses are released into larger pastures and left alone. One of the primary stipulations of the CA is “To maintain excess wild horses on private land in pastures that are large enough to allow free-roaming behavior and that can provide the food, water, and shelter necessary to sustain the animals in good condition”. Once the wild horses have acclimated to their new surroundings they will be moved into progressively larger pastures where they can roam free, search for food, create new bands, defend space and behave naturally.

Wild horses would be left alone as much as possible, outside of weekly counting and checking on body condition from a distance. This will help maintain the wild and free-roaming aspect of the ecosanctuary in as similar a setting as the wild horses are accustomed to. Herds of geldings in other BLM long-term holding pastures tend to run as one large herd during the early part of the day and break off into small bands in the later part of the day.

The presence of predators, mountain lions and bears along with the other predators described above (furbearers and predators p. 31) pose no threats beyond those similar to the present cattle operation. However, the presence of large carnivores will help retain the wild horse’s innate instincts for survival; defenses and heard character that help preserve the wild horses in the HMAs. As horses tend to band

together, it is unlikely the predators in the area would have much impact beyond the current situation. Predators may take sickly and or isolated animals. As the herd will be comprised of older geldings, it is unlikely predators will have a significant impact on the herd numbers.

No Action Alternative

Under the No Action alternative cattle would continue grazing under current ranch practices and the CA for the wild horse ecosanctuary would not be issued.

F. Wildlife and Fisheries

Proposed Action

Amphibians
Impacts to amphibians would occur if negative affects to stream habitat and wet meadows occur due to wild horse use. These impacts could include deposition of fine sediments on existing gravel or cobble substrates, physical disturbance of existing habitats, and displacement or loss of individuals within the area. However, as horses tend to utilize uplands more than cattle and do not linger in the riparian areas as cattle do, impacts to amphibians can be expected to be less than those from cattle.

Migratory Birds
The most critical stage for migratory birds in the project area would be during breeding and nesting season. Impacts to migratory birds during this period would include displacement from the area, nest destruction and loss of nesting success to individual birds. Both cattle and wild horses could directly impact migratory birds by stepping on ground nests with sitting birds and/or eggs or indirectly affect migratory bird populations by decreasing the amount of standing vegetation that provides habitat for migratory birds. During critical times of the year, during nesting and breeding, ranch activity can be altered to minimize disturbances. As horses tend to utilize open uplands and higher ground, more than cattle, physical damage to ground nesting birds could be lessened. During critical times of the year impacts to migratory birds could be managed for and potential impacts avoided.

Mountain plover are associated with areas of short vegetation often related to grazing. Mountain plover and other migratory birds that utilize short-grass type habitats would benefit due to maintained or improved habitat conditions through planned grazing.

Big Game
The main impacts to big game from the proposed action would be competition for forage and space with wild horses. Some level of disturbance to big game from the operation of the facility and tourism would occur. The rotational grazing system would enable managing for residual forage for big game. Supplemental feeding in the late fall and winter would also alleviate competition for forage resources. Although it is likely to also attract elk. Existing fences would be modified to “wildlife friendly” designs and any new fencing would be built to accommodate wildlife movement. Due to the use of wildlife friendly fence, loss of individual big game animals and changes in big game use patterns from fencing related to the ecosanctuary are expected to be negligible.

Elk use is mainly in the higher elevation portions of the project area on the west side of the Deerwood Ranch. Most of this use occurs during the late fall, winter and early spring period. Diet overlap and competition for space can be managed for given that the wild horses would spend the winter on the lower

ground and hay meadows. Competition for forage would be the main impact to elk. The level of competition would depend on seasonal precipitation, annual forage production and wild horse grazing duration and intensity. There would likely be some level of displacement of elk, but it is not possible to quantify the level of displacement that may take place due to the presence of wild horses. Increased human presence would need to be managed during critical times. Supplemental feeding of the wild horses during the winter months is likely to attract elk to the hay meadows.

Mitigation will entail frequent rotation of pastures where wild horses will be fed.

Moose in the area utilize the riparian and timbered areas on the south and southwest portion of the project area. There is generally good niche separation between moose and domestic livestock. However, some competition for space may impact moose. Foraging opportunities for moose would be reduced if wild horse use in riparian and aspen results in the displacement of moose and possibly a reduction in new growth of cottonwood, willow and aspen.

Pronghorn Antelope use the more open areas throughout the project area. Displacement of pronghorn and loss of grazing opportunities would occur if the presence of wild horses deters pronghorn use of some locations on the ranch.

Competition for space and forage would be the main impact to mule deer. There are approximately 90 acres of mule deer crucial winter range located in the southeast portion of the Deerwood Ranch. If wild horses utilize this area during the winter months, there may be a reduction in the number of mule deer that use the area. This displacement may increase winter range density of deer in other areas or cause mule deer to use less productive areas, thereby reducing overwinter survival and fitness of individual mule deer. Rotational grazing and supplemental feeding of wild horses would reduce the level of forage competition with mule deer.

No Action Alternative

Under the existing cattle operation, the impacts under the No Action alternative would not be increased beyond those already occurring.

V. Cumulative Impact Assessment

Proposed Action

The incremental impacts of the proposed action added to impacts of past, present and reasonably foreseeable future actions would be minimal, as converting an existing agricultural cattle operation to an agricultural wild horse operation would not significantly alter the Centennial Valley.

No significant future developments are anticipated either in the town of Centennial or in the Centennial Valley and no known changes in use of the surrounding lands are expected. Land ownership in the valley is comprised of USFS lands west of the ranch, and State of Wyoming Game and Fish Department walk-in areas east of State Highway 11 (see Map 1) that provide access to USFS on Sheep Mountain of Deerwood Ranch. No future developments are planned by the USFS or State of Wyoming Game and Fish Department on either of these properties.

The Deerwood Ranch Ecosanctuary provides an opportunity and forum for the public to learn more about the BLM Wild Horse and Burro Program, public lands, and the need for more long-term pastures and greater participation in the adoption program. It also provides a venue for discussion regarding a broad range of natural resource topics regarding land use management, maintenance of unfragmented agricultural lands as a benefit to wildlife, open space and the custom and culture of western communities.

Contact with the business owners in Centennial Valley revealed that, the economy of the Centennial Valley currently relies on tourism brought in by the designated Snowy Range Scenic Bi-way. As a new value-added enterprise, the Deerwood Ranch Ecosanctuary provides opportunity to increase exposure of all businesses in Centennial and surrounding communities to tourists visiting the area. It also creates a platform to educate and inform the public-at-large about natural resource management and multiple-use concepts.

VI. Consultation with Neighboring Landowners

The neighbors surrounding the Deerwood Ranch have been contacted about the new ecosanctuary proposal. They felt a private land owner should be allowed to provide pasture for wild horses just as they will be allowed to provide pasture for livestock.

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